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ARNOULD-REGUIGNE, Isabelle

PRADES, Catherine

ROSIER-MONTUS, Marie-Francoise

NAUDIN, Laurent

LEMOINE, Cendrine

DEAN, Michael

DENEFLE, Patrice

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NUCLEIC ACIDS OF THE HUMAN ABCA12 GENE, VECTORS CONTAINING SUCH NUCLEIC
ACIDS, AND USES THEREOF
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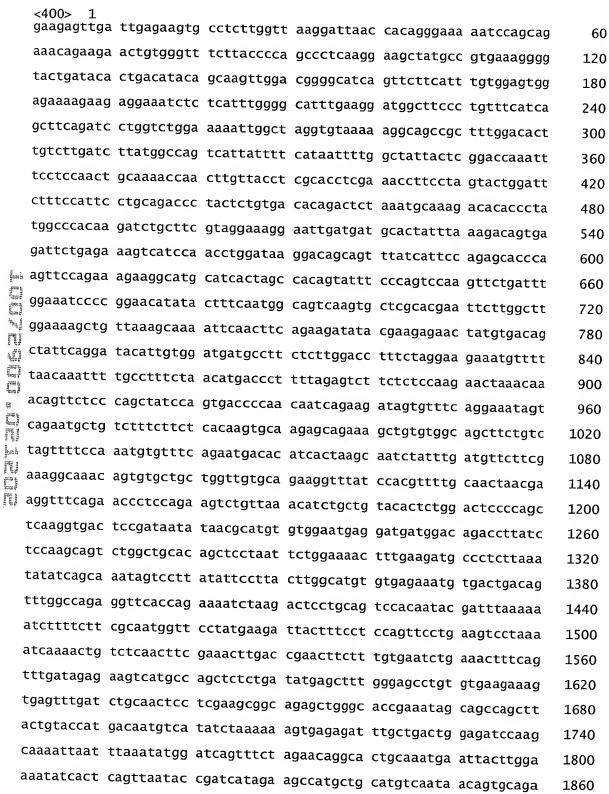
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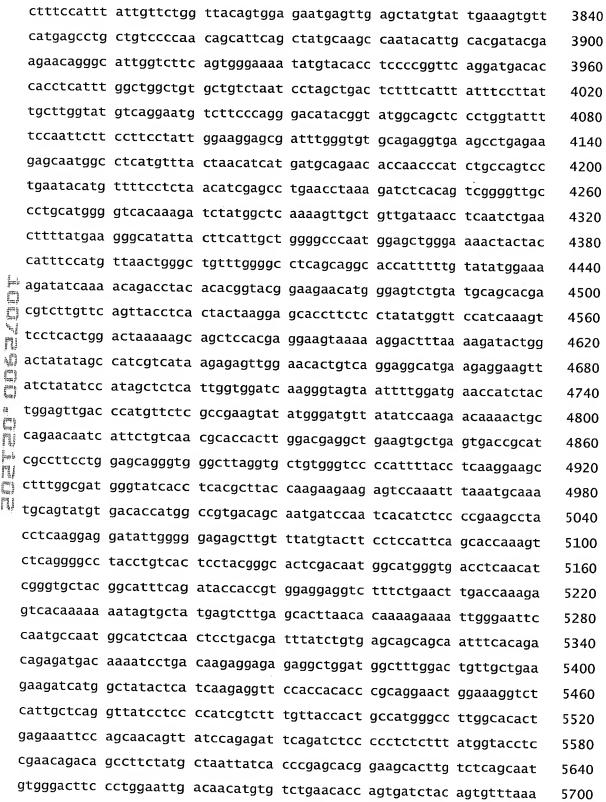
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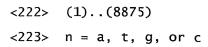
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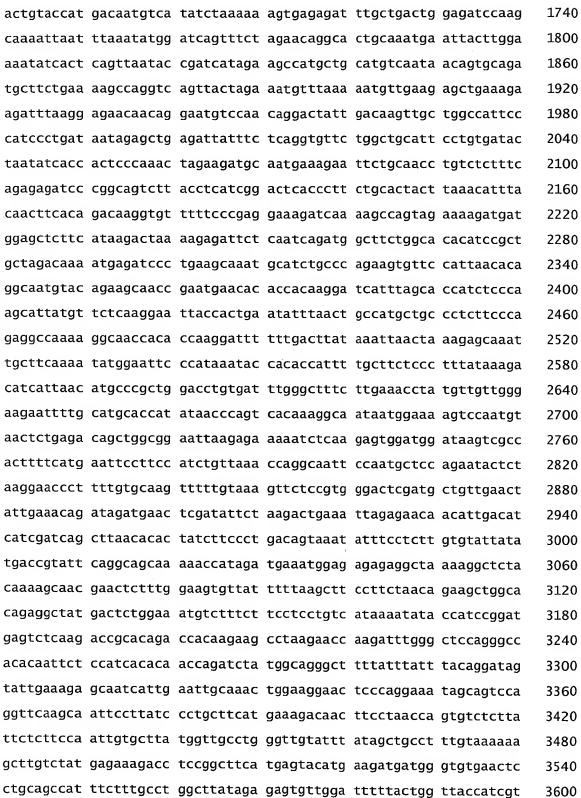
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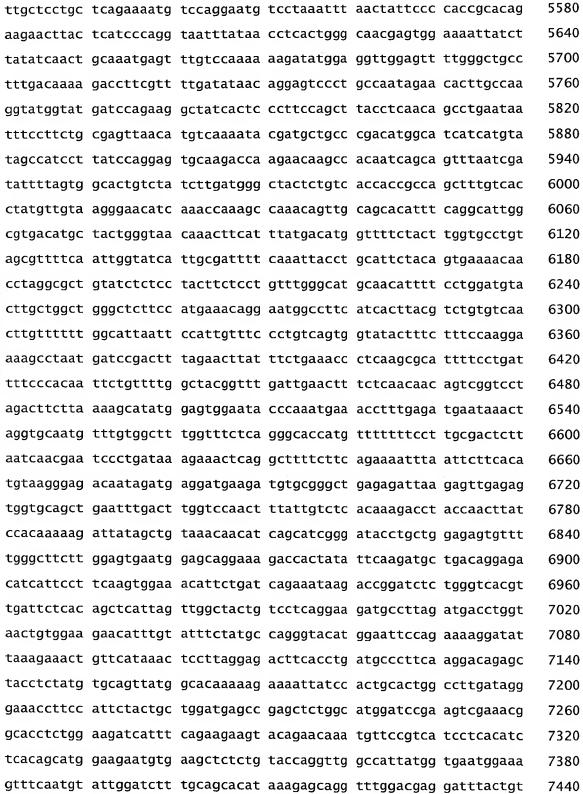






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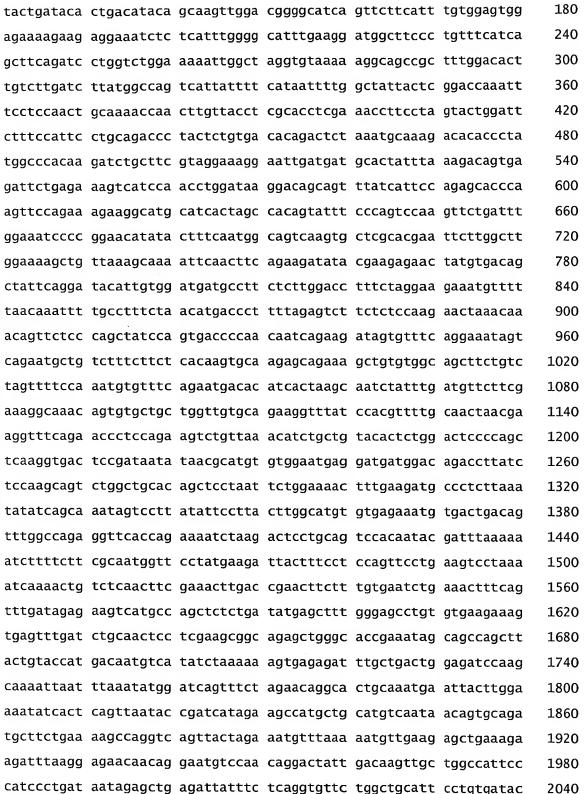
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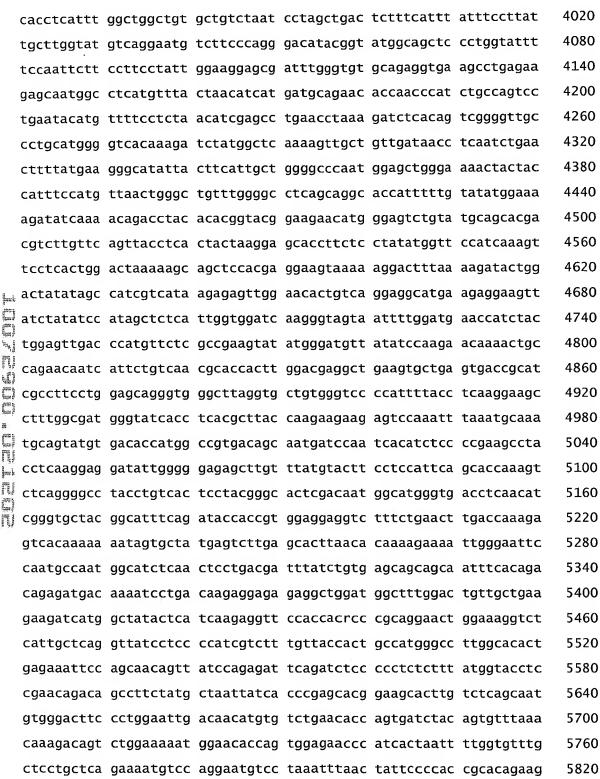
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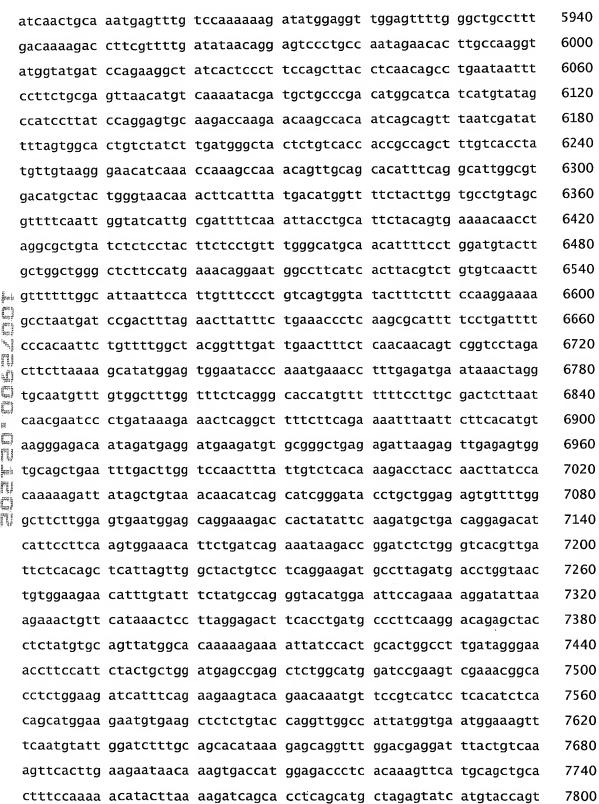




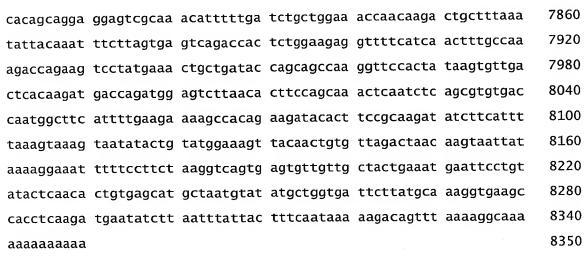
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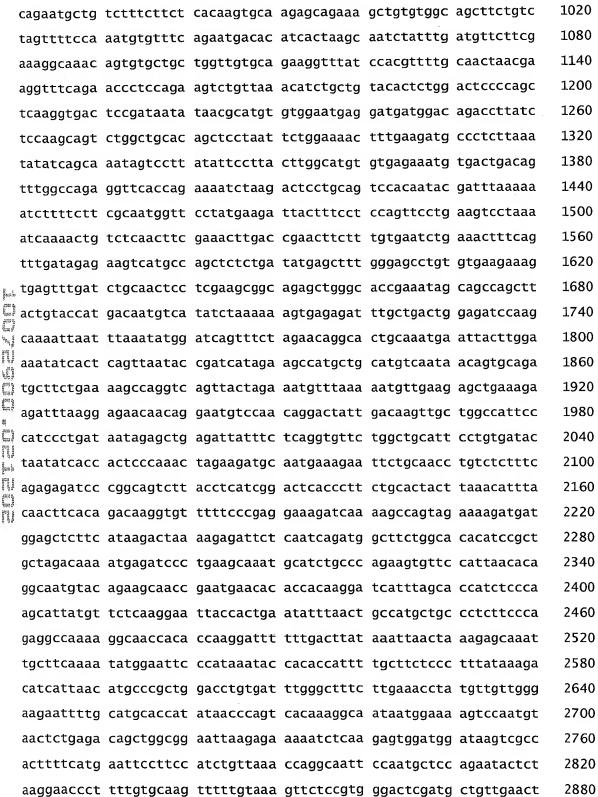
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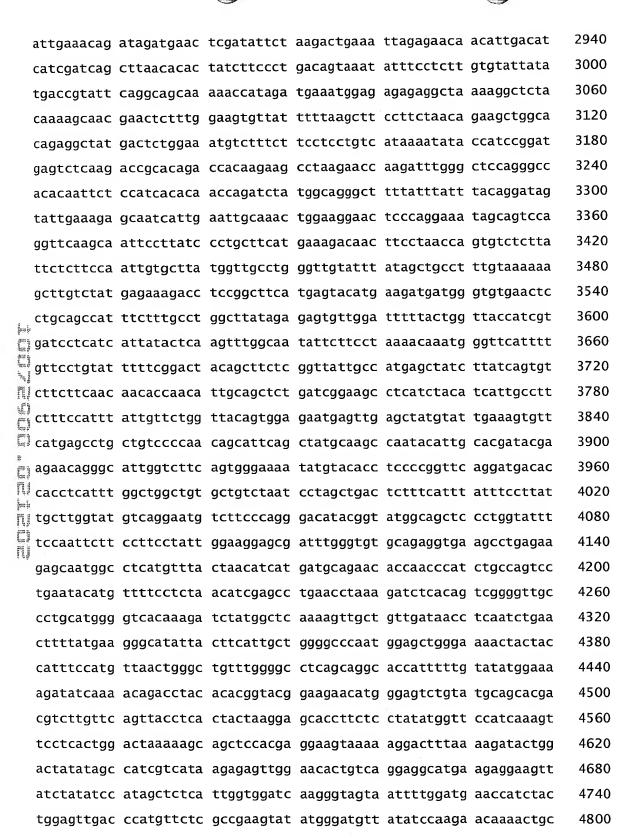
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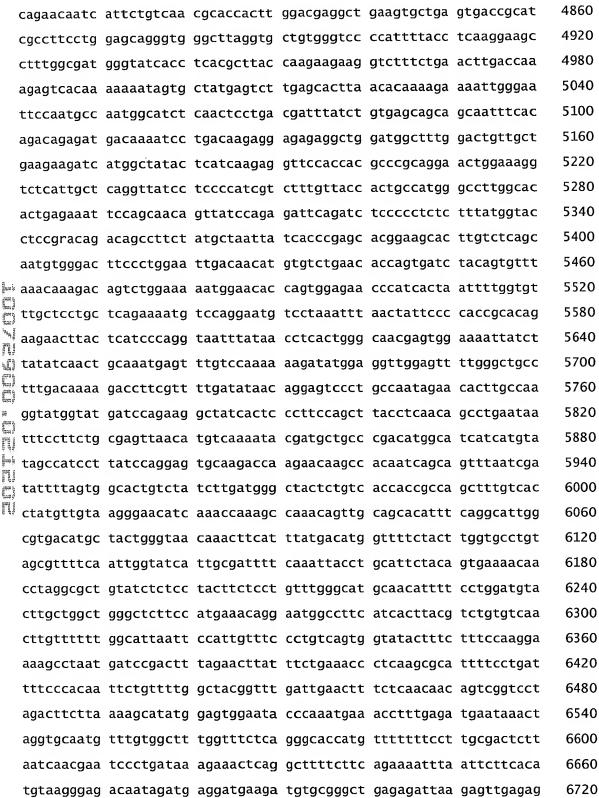
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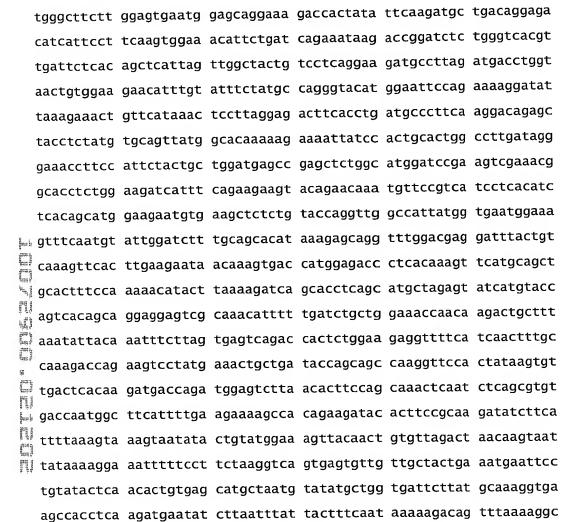
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Leu His Tyr Leu Asn Ile Tyr Asn Phe Thr Asp Lys Val Phe Phe Pro 22

645

655

Arg Lys Asp Gln Lys Pro Val Glu Lys Met Met Glu Leu Phe Ile Arg 660 665 670 Leu Lys Glu Ile Leu Asn Gln Met Ala Ser Gly Thr His Pro Leu Leu 675 680 685 Asp Lys Met Arg Ser Leu Lys Gln Met His Leu Pro Arg Ser Val Pro 690 700 Leu Thr Gln Ala Met Tyr Arg Ser Asn Arg Met Asn Thr Pro Gln Gly 705 715 720 Ser Phe Ser Thr Ile Ser Gln Ala Leu Cys Ser Gln Gly Ile Thr Thr 725 730 735 Glu Tyr Leu Thr Ala Met Leu Pro Ser Ser Gln Arg Pro Lys Gly Asn 740 745 750 His Thr Lys Asp Phe Leu Thr Tyr Lys Leu Thr Lys Glu Gln Ile Ala 755 760 765 Ser Lys Tyr Gly Ile Pro Ile Asn Thr Thr Pro Phe Cys Phe Ser Leu 770 780 Tyr Lys Asp Ile Ile Asn Met Pro Ala Gly Pro Val Ile Trp Ala Phe 785 790 795 800 Leu Lys Pro Met Leu Leu Gly Arg Ile Leu His Ala Pro Tyr Asn Pro 805 810 815 Val Thr Lys Ala Ile Met Glu Lys Ser Asn Val Thr Leu Arg Gln Leu 820 825 830 Ala Glu Leu Arg Glu Lys Ser Gln Glu Trp Met Asp Lys Ser Pro Leu 835 840 845 Phe Met Asn Ser Phe His Leu Leu Asn Gln Ala Ile Pro Met Leu Gln 850 860 Asn Thr Leu Arg Asn Pro Phe Val Gln Val Phe Val Lys Phe Ser Val 865 870 875 Gly Leu Asp Ala Val Glu Leu Leu Lys Gln Ile Asp Glu Leu Asp Ile 885 890 895 Leu Arg Leu Lys Leu Glu Asn Asn Ile Asp Ile Ile Asp Gln Leu Asn 900 905 910 Thr Leu Ser Ser Leu Thr Val Asn Ile Ser Ser Cys Val Leu Tyr Asp $915 \hspace{1.5cm} 920 \hspace{1.5cm} 925$ Arg Ile Gln Ala Ala Lys Thr Ile Asp Glu Met Glu Arg Glu Ala Lys 930 940 Arg Leu Tyr Lys Ser Asn Glu Leu Phe Gly Ser Val Ile Phe Lys Leu 945 950 955 960 Pro Ser Asn Arg Ser Trp His Arg Gly Tyr Asp Ser Gly Asn Val Phe 965 970 975 Leu Pro Pro Val Ile Lys Tyr Thr Ile Arg Met Ser Leu Lys Thr Ala 980 985 990

23

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Ser Lys Tyr Asp Ala Ala Arg His Gly Ile Ile Met Tyr Ser His 1955 1960 1965 Pro Tyr Pro Gly Val Gln Asp Gln Glu Gln Ala Thr Ile Ser Ser 1970 1980 Leu Ile Asp Ile Leu Val Ala Leu Ser Ile Leu Met Gly Tyr Ser Val Thr Thr Ala Ser Phe Val Thr Tyr Val Val Arg Glu His Gln Thr Lys Ala Lys Gln Leu Gln His Ile Ser Gly Ile Gly Val Thr 2015 2020 Cys Tyr Trp Val Thr Asn Phe Ile Tyr Asp Met Val Phe Tyr Leu 2040 val Pro Val Ala Phe Ser Ile Gly Ile Ile Ala Ile Phe Lys Leu Phe Tyr Ser Glu Asn Asn Leu Gly Ala Val Ser Leu Leu 2065 2070 Pro Ala Leu Leu Leu Phe Gly His Ala Thr Phe Ser Trp Met Tyr Leu Leu 2075 Ala Gly Leu Phe His Glu Thr Gly Met Ala Phe Ile Thr Tyr Val 2095 T) Cys Val Asn Leu Phe Phe Gly Ile Asn Ser Ile Val Ser Leu Ser 2105 2110 2115 Val Val Tyr Phe Leu Ser Lys Glu Lys Pro Asn Asp Pro Thr Leu 2120 2130 🖟 Glu Leu Ile Ser Glu Thr Leu Lys Arg Ile Phe Leu Ile Phe Pro 2135 Gln Phe Cys Phe Gly Tyr Gly Leu Ile Glu Leu Ser Gln Gln Gln 2150 2160Ser Val Leu Asp Phe Leu Lys Ala Tyr Gly Val Glu Tyr Pro Asn 2165 2170 2175 Phe Glu Met Asn Lys Leu Gly Ala Met Phe Val Ala Leu 2185 2190 Glu Thr 2180 Val Ser Gln Gly Thr Met Phe Phe Ser Leu Arg Leu Leu Ile Asn 2195 2200 Glu Ser Leu Ile Lys Lys Leu Arg Leu Phe Phe Arg Lys Phe Asn 2210 2215 2220 His Val Arg Glu Thr Ile Asp Glu Asp Glu Asp Val Arg Ser Ser 2225 Ala Glu Arg Leu Arg Val Glu Ser Gly Ala Ala Glu Phe Asp Leu 2240 2250 Val Gln Leu Tyr Cys Leu Thr Lys Thr Tyr Gln Leu Ile His Lys 2265 2260

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2590 2595

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<212> PRT

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<222> (1)..(2516)

<223> Xaa = any amino acid

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Pro Val Ile Ile Phe Ile Ile Leu Ala Ile Thr Arg Thr Lys Phe Pro 35 40 45

Pro Thr Ala Lys Pro Thr Cys Tyr Leu Ala Pro Arg Asn Leu Pro Ser 50 60

Thr Gly Phe Phe Pro Phe Leu Gln Thr Leu Leu Cys Asp Thr Asp Ser 75 80

Lys Cys Lys Asp Thr Pro Tyr Gly Pro Gln Asp Leu Leu Arg Arg Lys 85 90 95

Gly Ile Asp Asp Ala Leu Phe Lys Asp Ser Glu Ile Leu Arg Lys Ser 100 105 110

Ser Asn Leu Asp Lys Asp Ser Ser Leu Ser Phe Gln Ser Thr Gln Val 115 120 125

Pro Glu Arg Arg His Ala Ser Leu Ala Thr Val Phe Pro Ser Pro Ser 130 135 140

Ser Asp Leu Glu Ile Pro Gly Thr Tyr Thr Phe Asn Gly Ser Gln Val 145 150 155 160

Leu Ala Arg Ile Leu Gly Leu Glu Lys Leu Leu Lys Gln Asn Ser Thr 165 170 175

Ser Glu Asp Ile Arg Arg Glu Leu Cys Asp Ser Tyr Ser Gly Tyr Ile 180 185 190

Val Asp Asp Ala Phe Ser Trp Thr Phe Leu Gly Arg Asn Val Phe Asn 195 200 205

Lys Phe Cys Leu Ser Asn Met Thr Leu Leu Glu Ser Ser Leu Gln Glu

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